

# Moscow International School of Physics 2024

*28 February – 6 March 2024*

2<sup>nd</sup> bulletin

The Moscow International School of Physics (MISP) is aimed at advanced students, PhD students and young postdocs working in high-energy physics. The program covers not only experimental and theoretical HEP physics, but also related fields: cosmology, machine learning, and mathematical physics. It should be noted that some preliminary knowledge of the subjects is necessary in order to be able to fully profit from the lecture courses. In addition to lecture courses, time will be allocated for presentations by participants of their own research (Young Scientist Forum). The School language is English.

## School Site and Date

The Moscow International School of Physics 2024 will be held between 28 February and 6 March 2024 at the HSE Study Center “Voronovo”, Moscow.

The School is organized by the P.N. Lebedev Physical Institute of the Russian Academy of Sciences (LPI RAS), National Research University Higher School of Economics (HSE), and Skolkovo Institute of Science and Technology (Skoltech). LLC MESOL is the authorized operator of the School.

## Program Committee

- M. Danilov (LPI RAS, Moscow) — chair
- D. Gorbunov (INR RAS, Moscow)
- G. Kabatiansky (Skoltech, Moscow)
- D. Kazakov (JINR, Dubna)
- A. Marshakov (Skoltech, Moscow)
- V. Novikov (LPI RAS, Moscow)
- F. Ratnikov (HSE, Moscow)
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## Organizing Committee

- T. Aushev (HSE, Moscow) — chair
- M. Chuyashkin (HSE, Moscow)
- G. Kabatiansky (Skoltech, Moscow)
- S. Polikarpov (LPI RAS, Moscow)
- F. Ratnikov (HSE, Moscow)
- N. Skrobova (LPI RAS, Moscow)
- E. Solovieva (LPI RAS, Moscow)
- T. Uglov (LPI RAS, Moscow and HSE, Moscow)

# Scientific Programme

Time	28.02							29.02							01.03							02.03							03.03							04.03							05.03							06.03																											
	Wednesday							Thursday							Friday							Saturday							Sunday							Monday							Tuesday							Wednesday																											
08:00 – 09:00								Breakfast							Breakfast							Breakfast							Breakfast							Breakfast							Breakfast							Breakfast							Breakfast																				
09:00 – 10:00								Levkov							Miagkov							Miagkov							Miagkov							Gorbunov							Gorbunov							Gorbunov							Gorbunov							Gorbunov													
10:00 – 11:00								Kazakov							Levkov							Levkov							Levkov							Smirnov							Smirnov							YSF							Logashenko																				
11:00 – 12:00								Break							Break							Break							Break							Break							Break							Break							Break							Break													
12:00 – 13:30	Arrival							Registration							Break							Break							Break							Break							Break							Break							Break							Break													
13:30 – 15:00	Lunch							Lunch							Lunch							Lunch							Lunch							Lunch							Lunch							Lunch							Lunch							Lunch													
15:00 – 16:00	Kazakov							Smirnov							Smirnov							Smirnov							Smirnov							Smirnov							Smirnov							Smirnov							Smirnov							Smirnov													
16:00 – 16:30	Coffee Break							Coffee Break							Coffee Break							Coffee Break							Coffee Break							Coffee Break							Coffee Break							Coffee Break							Coffee Break							Coffee Break													
16:30 – 17:30	Kazakov							Kazakov							Kazakov							Kazakov							Kazakov							Kazakov							Kazakov							Kazakov							Kazakov							Kazakov													
17:30 – 18:30	Dolgov							Ratnikov							Ratnikov							Ratnikov							Ratnikov							Ratnikov							Ratnikov							Ratnikov							Ratnikov							Ratnikov													
18:30 – 19:00																																																																													
19:00 – 20:00	Dinner							Dinner							Dinner							Dinner							Dinner							Dinner							Dinner							Dinner							Dinner							Dinner													
20:00 – 21:00								YSF							YSF							YSF							YSF							YSF							YSF							YSF							YSF							YSF													
21:00 – 22:00																						Concert							Concert							Concert							Concert							Concert							Concert							Concert													

- A. Bondar (BINP) “Flavor Physics” • A. Dolgov (Novosibirsk St. U. & JINR) “Primordial Black Holes” • D. Gorbunov (INR RAS) “Cosmology and Particle Physics” • D. Kazakov (JINR) “Standard Model and beyond” • D. Levkov (INR RAS) “Black Holes” • I. Logashenko (BINP) “Muon Anomalous Magnetic Moment” • A. Miagkov (NRC Kurchatov Institute – IHEP) “Physics at Energy Frontier” • F. Ratnikov (HSE) “Machine Learning for Physicists (Practical Course)” • A. Smirnov (ICTP) “Neutrino Physics” • Young Scientist Forum with a Poster Session

## Young Scientist Forum

Special sessions will be devoted to the presentations of participants' own scientific results. The report should be in the form of a brief talk (10+2 minutes) or a poster (A1 portrait). The Program Committee will select talks and posters from the submitted ones for presentation. The most interesting talks will be published in the peer-reviewed journal "Bulletin of the Lebedev Physics Institute" indexed by the Web of Science platform. Authors of the posters, most voted for by the School participants, will receive special prizes.

## Social Program

Midday hours before lunch will be dedicated to sports and other kinds of activity. A limited number of cross-country skis will be available for free. The skis are fine for the beginners, but we encourage experienced skiers to bring their own equipment. A free shuttle to the ski track and back will be organized on 3<sup>rd</sup> and 4<sup>th</sup> March.

Walking in the nearby forest will also be possible, there are several tracks within reach. During the walks one should be aware that the forest itself is quite large, and mind the way back.

Table tennis and darts equipment will be available for free. Depending on the weather, there could be a possibility to play football, volleyball, badminton, or frisbee outside, the equipment will be provided by the organizers.

The School social program will also include a concert.

## School Fee

The School fee payment serves as the confirmation of participation and is not refundable. Foreign participants should pay the fee in cash upon arrival.

Before the departure, the School participants will receive documents, confirming the participation in the School and the payment. If you need extra documents prepared, please contact the Organizing Committee in advance.

## Accommodation

The majority of the School events will be held at the HSE Study Center "Voronovo". The Center is set in scenic surroundings on the edge of an old forest and boasts spacious premises that are fully equipped for both educational and extracurricular events, and also for leisure activities ranging from sports to intellectual games. Wi-Fi is available across the site.

The Study Center comprises of two connected but separate buildings — main and public. The main building offers hotel-style accommodation consisting of fully equipped standard rooms and suites, that have bathrooms, TV sets, and fridges. During the School participants will be accommodated in double rooms.

# Transportation

HSE Study Center “Voronovo” is located  $\sim 70$  km to the south of Moscow (GPS coordinates:  $55.315035^\circ\text{N}$ ,  $37.123825^\circ\text{E}$ ) and has a poor accessibility by the public transport. Organizers will provide free bus shuttles for participants from/to Moscow at the first/last days of the School.

**The School buses will depart from the parking lot near the Leninsky Prospekt Metro station (south exit) on 28<sup>th</sup> February at 10:00 sharp and will return to the same place by 15:00 on the departure day.**



Figure 1: School bus meeting point. GPS coordinates:  $55.707730^\circ\text{N}$ ,  $37.582483^\circ\text{E}$ .

## Climate

Moscow region climate is typically continental. Weather in the beginning of March fits well for various winter sports. It is usually sunny. The average temperature is about  $-2^\circ\text{C}$  though sudden drops of temperature could be expected, as well as thaws, so having proper warm clothes is advised.

## Currency and Credit Cards

Most foreign credit cards do not work in Russia nowadays. We recommend to have some cash always with you.

Money exchange (preferably Euro or US dollars) is possible in banks.

## Contacts

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